

# Recent developments in Australian household debt

Household debt in Australia has risen to record levels in recent years with highly geared households also coming under increased stress due to deteriorating conditions in asset prices, incomes and interest rates. This paper assesses recent developments in household debt from macroeconomic and microeconomic perspectives, and provides a research agenda to cast further light on the causes of burgeoning household debt.



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IN NEARLY ALL OECD ECONOMIES, including Australia, household debt has risen to record levels during the past two decades. The key contributing factors were generally buoyant housing markets, favourable financial markets providing lower borrowing costs, and relatively easy access to capital. Financial deregulation, liberalisation, and innovation have also had a role to play. Competition has meant that reductions in lending margins have been passed on to consumers, and loans for investor housing have risen dramatically as financial institutions have sought to expand their portfolios with loans on high-return, low-risk residential properties, and by offering investors products such as split-purpose and interest-only loans.

The development of new products, particularly home equity loans and redraw facilities, has also enabled households to manage more flexibly their equity for housing and other investment and consumption purposes. Technology has likewise improved, lowering transaction and search costs for consumers. Also, government policy has combined with market forces to lower some pre-

existing credit constraints facing borrowers – particularly for first-home buyers – and provide an encouraging taxation environment for both owner-occupied and investor housing. Together, these effects have been particularly noticeable in economies with hitherto lower levels of debt that have now grown towards some higher OECD benchmarks (Girouard et al. 2007).

The rapid growth in household debt to record levels has raised valid concerns about the sensitivity of the household sector to changes in interest rates, asset prices, and incomes. This is evidenced by the increasing interest of central banks.<sup>1</sup> Again, while such concerns are relatively common across the OECD, they have been heightened by the US sub-prime mortgage crisis, where rising interest rates, a bursting housing bubble, a slowing economy, questionable securitisation practices and credit policies, and a surfeit of market optimism have combined to initiate a series of far-reaching impacts. Together, these developments illustrate the need to balance the evidence and causes of burgeoning household debt across the

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developed world, fine-tuned by national market, institutional and regulatory conditions.

This paper provides a brief snapshot and discussion of recent developments in Australian household debt from macroeconomic and microeconomic perspectives and, where possible, provides some comparisons with similar economies. This provides the basis for a possible research agenda to throw further light on some outstanding areas of interest relating to the growth of household debt.

### A macroeconomic perspective

One perspective on aggregate household debt is obtained by considering household debt as a percentage of assets or household gearing. This throws useful light on the relative changes in household net worth and the composition of household assets. As shown in Table 1, the composition of the household asset portfolio has only changed marginally in the past two decades with non-financial assets (consumer durables and dwellings) accounting for about 60% of total household assets – most being dwellings. This is reflected in the composition of household debt: borrowing for housing currently accounts for about 86% of total household debt (RBA 2008).

**TABLE 1: Household assets, percentage of total by end of calendar year**

	1988	1998	2008
Non-financial assets	64.2	59.3	60.6
Consumer durables	9.2	6.6	4.1
Dwellings	55.1	52.7	56.6
Financial assets	35.8	40.7	39.4
Superannuation and life offices	15.9	20.2	22.5
Equity and unit trusts	5.8	7.7	7.1
Currency and deposits	10.3	9.3	7.6
Other	3.7	3.4	2.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Financial assets include assets of unincorporated enterprises. Superannuation includes unfunded superannuation. 2008 data is as at March. Source: Australian Bureau of Statistics (ABS).

As shown in Figure 1, the ratios of household debt to assets and household housing debt to housing assets have both increased substantially in the past two decades. Using the most recently available figures, household debt to assets is now 17.4% (compared to 8.1% in 1988) and housing debt to housing assets is 26.4% (10.8% in 1988).

The second aggregate measure considers household debt as a percentage of household disposable income. As shown in Figure 2, total household debt to assets has grown from 45.6% in June 1988 to 81.7% in June 1998 and to 160.4% most recently. In the past 10 years, housing debt to disposable income has also risen from 67.5% to 137.3%, while owner-occupied housing debt to disposable income has risen from 51% to 93.9%.

**FIGURE 1: Household debt to assets**



Source: Reserve Bank of Australia (RBA).

In relative terms, the ratio of household debt to income in Australia has risen from a relatively low level to the upper range for comparable economies. Table 2 provides household debt and net wealth as a percentage of annual disposable income from a recent OECD paper (Girouard et al. 2007). Australia had the second-highest rate of increase in the debt-to-income ratio between 1995 and 2005 for the 15 OECD economies shown and, in 2005, had the fourth-highest level of debt relative to annual disposable income.

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**TABLE 2: Household debt as a percentage of annual disposable income**

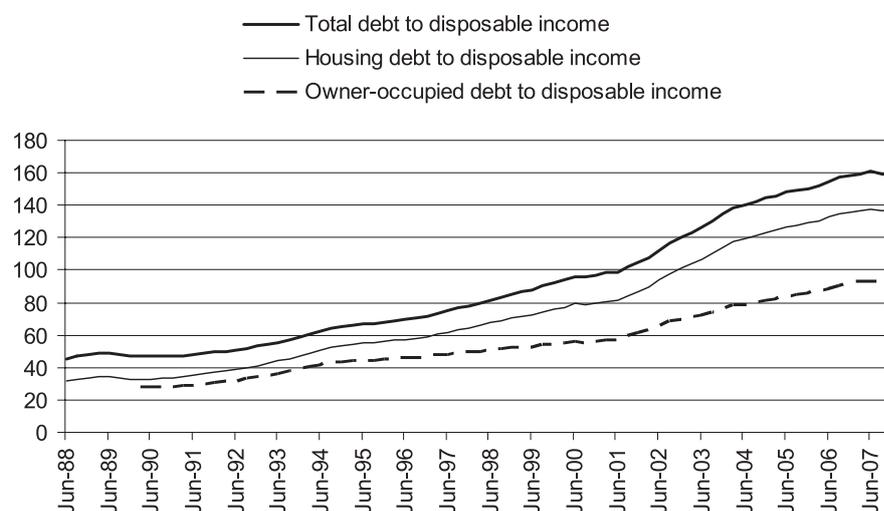
	1995	2000	2005
Australia	83	120	173
Canada	103	114	126
Denmark	188	236	260
Finland	64	66	89
France	66	78	89
Germany	97	111	107
Ireland	n/a	81	141
Italy	32	46	59
Japan	130	136	132
Netherlands	113	175	246
New Zealand	96	125	181
Spain	59	83	107
Sweden	90	107	134
United Kingdom	106	118	159
United States	93	107	135

Source: Girouard et al. 2007.

An alternative perspective on household debt is obtained by considering debt-service ratios – the fraction of disposable income devoted to debt repayment. While two measures of debt-servicing capacity are informative – one employing interest payments only and another with interest payments and principal repayments – the later, rather more informative measure, is difficult to obtain in Australia using aggregate data.

As shown in Figure 3, interest payments as a percentage of disposable income have reached a two-decade high of 12%. Arguably, however, this overstates the average interest-payment ratio as it is accompanied by an increase in the proportion of the life cycle that owner-occupier households retain debt and by the increasing proportion of households with investor housing debt (RBA 2008). At the international level, most comparable economies experienced relatively stable interest-service burdens in the 1990s with the general increase in indebtedness illustrated in Table 2 mostly offset by declines in borrowing costs (though now also rising with higher interest rates).

**FIGURE 2: Household debt to income**



Source: Reserve Bank of Australia (RBA).

## A microeconomic perspective

Aggregate indicators (such as considered in the previous section) mask important disparities in financial conditions across different households in the population (Girouard et al. 2007). These disparities can be studied using, among other things, household-level surveys, information from the Australian Prudential Regulation Authority on non-performing loans and, most recently, court data from NSW and Victoria on applications for property possession. The richness of these datasets contrasts sharply with the macroeconomic aggregate data provided on a quarterly basis by the Australian Bureau of Statistics (ABS).

In recent years, attention has increasingly focused on indicators of household financial duress, including housing loan arrears and applications for property possession. As at December 2007, 0.322% of banks' housing loans were non-performing and the 90-day arrears rate for securitised housing loans was 0.40%.<sup>2</sup> Overall, these figures appear broadly consistent with the limited international comparisons available; mortgage delinquency rates (as a percentage of loans outstanding) are below 1% in most OECD economies with the exception of the US.

However, these figures can obscure sizeable differences in households, especially at a geographic level. For example, the most recent *Financial Stability Report* (RBA 2008) identifies that NSW has a substantially higher 90-day arrears rate than other states. Moreover, it is unevenly distributed, with rates in excess of 1.0% in Greater Western Sydney and less than half that in the remainder of Sydney and the rest of NSW. In terms of other forms of household debt, as at December 2007, the non-performing rate for personal loans was 0.8% and 1.0% for credit cards.

Several other developments in household debt are worth noting. First, Australian households have increasingly turned to fixed-rate housing loans (currently some 25% of all owner-occupier approvals). Second, the high growth rates in borrowing for investor housing and credit cards have fallen

for much of the past decade, with credit card debt now growing at its slowest rate over that period (9%) (RBA 2008). This contrasts sharply with the 10-year and five-year average growth rates of 17.4% and 20.9% just a few years earlier.

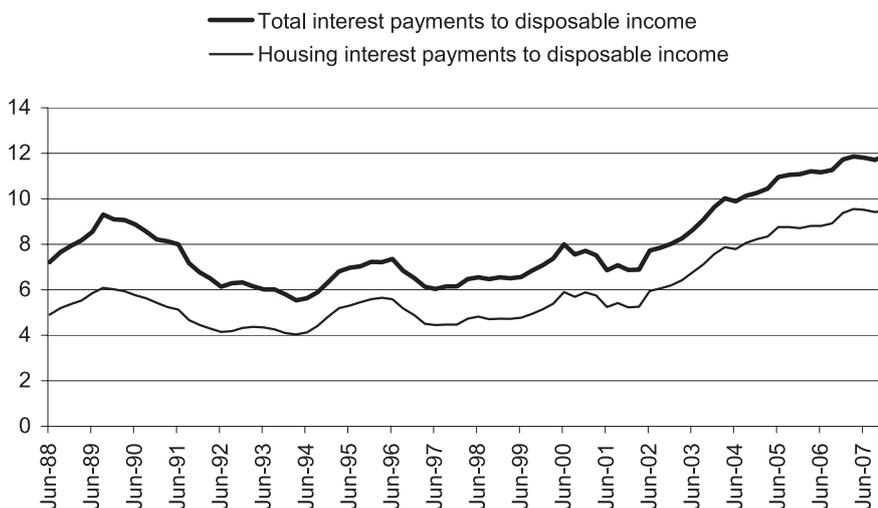
## A research agenda

The Household Expenditure Surveys (HES) conducted by the ABS and the Household Income and Labour Dynamics in Australia (HILDA) Survey administered by the Melbourne Institute are the most readily available and cost-effective means of obtaining detailed information on household debt in Australia at the micro level.

The HES collects detailed information about expenditure, income and household characteristics and is administered on a five-yearly basis with the most recent surveys in 1993–94, 1998–99 and 2003–04. Data on average weekly expenditure on more than 600 goods and services (including mortgage payments and details of the separate mortgages and loans held by the household) are provided in the survey. These can be cross-classified with household income, household net worth (2003–04 only), household characteristics (including composition and structure), individual characteristics (including education and occupation) and geographical location (state, capital city/rest of state). From 1998–99, information on financial stress is also available and, from 2003–04, income in the previous financial year.

While comprehensive, the main limitations of the HES are that it is infrequent and that each survey is essentially a unique cross-section (i.e. there is no attempt to link households across time). However, it is possible to measure the distribution of household debt and debt repayments by categories of income and the age of the household head to obtain measures of the distribution of debt gearing and burden. Geographic household identifiers across households would also be useful; however, these are currently restricted to very broad categories such as state, capital city, urban and rural.

FIGURE 3: Household interest payments to income



Source: Reserve Bank of Australia (2008).

HILDA's objectives include the provision of a wide range of social statistics and the investigation of new methods of measuring change and social trends. The report contains information and statistical tables covering households and family life; incomes and wealth; employment and unemployment/joblessness; and life satisfaction and well-being. Unlike the HES, HILDA is a longitudinal study so it is technically possible to follow debt-holding households over time and at more frequent intervals. Currently, Wave 6 has been released with questions on topics such as repayments, original and outstanding debt, and refinancing. Unfortunately, the HILDA survey does not separately identify interest and principal repayments. Like the HES, HILDA also includes some questions relating to household stress.

Within the constraints of the household-level data available in the HES and HILDA, the extant literature concerning the causes and consequences of household debt may be categorised into three areas:

- attempts to explain differing household financial strategies, or the different patterns of financial assets and debts found in households, and to link these with consumption, saving and borrowing behaviour;
- efforts to investigate the factors which are associated with the source, level and conditions of debt that a household demands; and
- studies that explore the issues related to insolvency in household finances, usually in terms of predictive models of debt repayments, delinquency and bankruptcy.

All of these offer fruitful areas for further Australian research using the available data.

A small amount of empirical attention has been directed at analysing the linkage between household portfolio choices and other household behaviour. This is important because the impact of policies on households' saving and debt behaviour (and consumption) can vary across different groups in an economy in ways not reflected at the aggregate level. Gunnarsson and Wahlund (1997), for example, categorised the financial choices of Swedish households into residual saving, contractual saving, security saving, risk hedging, prudent investing and 'divergent' strategies and examined the impact of financial planning and control, financial wealth and home ownership, and attitudes to risk-taking across these categories. They concluded that contractual savers had a very heavy debt burden and relied upon credit cards, whereas residual savers had fewer loans and few even possessed credit cards. As an alternative, Viaud and Roland-Levey (2000) organised a typology of four classes defined by how households strived to build up their capital, namely 'accumulating savers', 'prodigal households', 'prudent agents' and 'fragile borrowers'. Using the concept of social identity, Viaud and Roland-Levey (2000) examined why households in different economic positions may have the same sort of structural relationships regarding savings and credit.

Other work in this area has concentrated on the link between household portfolios and decisions regarding

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consumption or savings/borrowing. For example, de Ruiters and Smart (1999) examined the relationship between the household balance sheet and consumer durables expenditure. In particular, they addressed the potential impact of the excessive debt burdens built up by households during financial deregulation. While finding that household wealth was an important determinant of consumer expenditure, they also found no evidence that 'excessive' household debt ratios were directly responsible for slowing consumer durables expenditure. They concluded that an emphasis on debt-income ratios at the aggregate level was misleading and that it was '... probably merely an illustration of common failures to consolidate balance sheets on an appropriate level when discussing macroeconomic issues'. Engelhardt (1996) examined the empirical link between house price appreciation and the saving/borrowing behaviour of homeowners. Interestingly, he concluded that a savings asymmetry existed whereby households that experienced real gains in wealth did not change their saving/borrowing behaviour.

A generally more extensive area of research has focused on the demand for household debt. At least some part of this work is aimed at differentiating mortgage demand and housing demand, while others are concerned with the interactions between the choice of mortgage instrument and the role of mortgage rationing and liquidity constraints. Leece (2000a), for instance, used the UK Family Expenditure Survey to estimate reduced form mortgage demand equations to analyse the impact of market rationing and financial liberalisation on households. He found significant cross-sectional variation regarding the demand for mortgages, and that the choice of mortgage instrument involving saving in an alternative investment vehicle reflects important portfolio and liquidity consideration. Leece (2000b) also examined the determinants of UK household mortgage debt, through using the British Household Panel Survey (BHPS) and in the context of the choice between floating or fixed interest rates. He concluded that no socioeconomic variables, including age and first-time buyers and marital status, were significant factors in influencing the choice of mortgage instrument.

Demand functions for household debt have also been modelled in the United States. For example, Crook (2001) used the Survey of Consumer Finance to examine the factors that determined whether a credit applicant was likely to be rejected and/or discouraged from future application and what variables significantly affected the demand for household debt. While the research

concluded that household debt was a function of household age, income, size and employment status, it was largely unaffected by the level of expected future interest rates. Alternatively, Ling and McGill (1998) used the American Housing Survey to simultaneously estimate mortgage debt level with house value. They found that larger debt values were often associated with greater value residences and with the level of household income, along with household mobility and other demographic variables. Crook and Hochguertel (2006) and Worthington (2006b) have recently also examined the demand for household debt as a function of financial, demographic and socioeconomic factors.

The final area of empirical research is concerned with consumer debt repayment in the context of household insolvency, delinquency and bankruptcy. Böheim and Taylor (2000), for example, examined evictions and repossessions using the BHPS. The results showed that previous financial problems had a significant and positive association with the current financial situation and the probability of eviction, and that negative financial surprises were an important route to financial difficulties (after controlling for life events such as divorce and loss of employment). Walker (1996) also examined a significant

life event, childbirth, as a source of financial strain and presented evidence that psychological and behavioural variables had a considerable impact on being in or keeping out of debt. Worthington (2006a) analysed debt in the context of household repayment difficulties, financial stress insolvency and bankruptcy.<sup>3</sup>

## Summary

Household debt has grown strongly in recent years, with aggregate gearing and debt-service ratios increasingly exposing households to deteriorating conditions in asset prices, incomes and interest rates. At the microeconomic level, some categories of households are coming under increasing stress with tighter credit conditions acting negatively on highly geared households. Further opportunities exist for research to cast light on the behaviour of these households, by examining household financial strategies and linking these with consumption, saving and borrowing behaviour. This research could also investigate factors associated with the source, level and conditions of debt that households demand, and explore insolvency and financial stress, usually in terms of predictive models of debt repayments, delinquency and bankruptcy. ☺

## Notes

- 1 See, for example, Schwartz et al. (2006), Bucks et al. (2006).
- 2 For low-doc loans the 90-days arrears rate was 0.70% in November 2007, and 7.25% for non-conforming loans.
- 3 Worthington (2006a) provides further references for international studies addressing the same issue.

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